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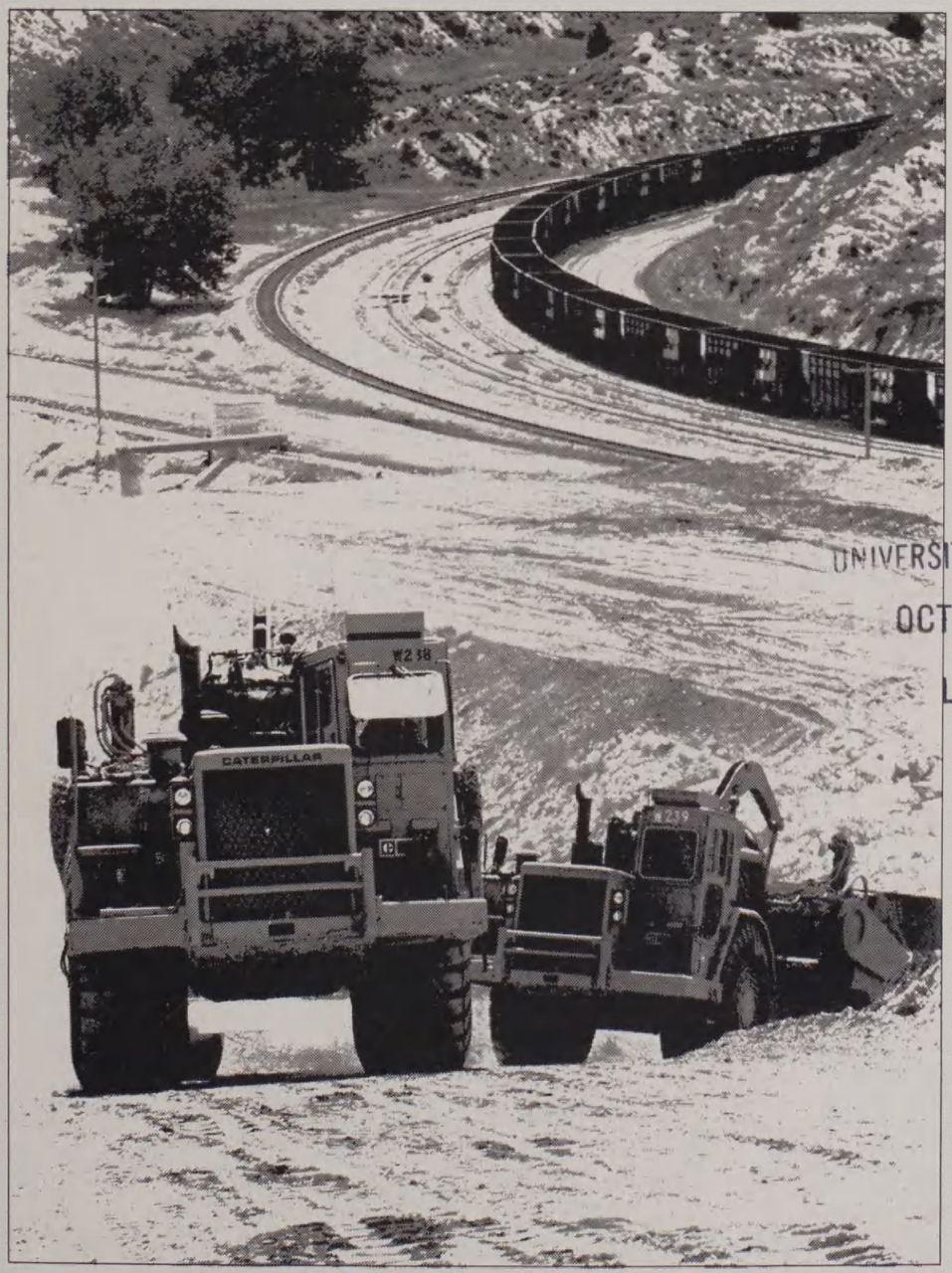

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Montana's Troubled Coal Industry

A 1986 Update

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2 Montana's Troubled Coal Industry: A 1986 Update
Paul E. Polzin

9 Small Business: Panacea or Pipedream?
David Mandy

12 The Montana Poll
The Consumer Outlook: Favorable but Cautious
Mary L. Lenihan

13 The Montana Poll
Montanans Comment on State Political Leaders
Nicole Flemming

17 Perspectives on Montana's Lagging Growth
Tat P. Fong

21 Forecasting Montana's Economy
Paul E. Polzin

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Dean, School of Business Administration

MAXINE C. JOHNSON
Director, Bureau of Business and Economic Research

MARY LOGAN LENIHAN
Editor

NICOLE FLEMMING
Production Editor

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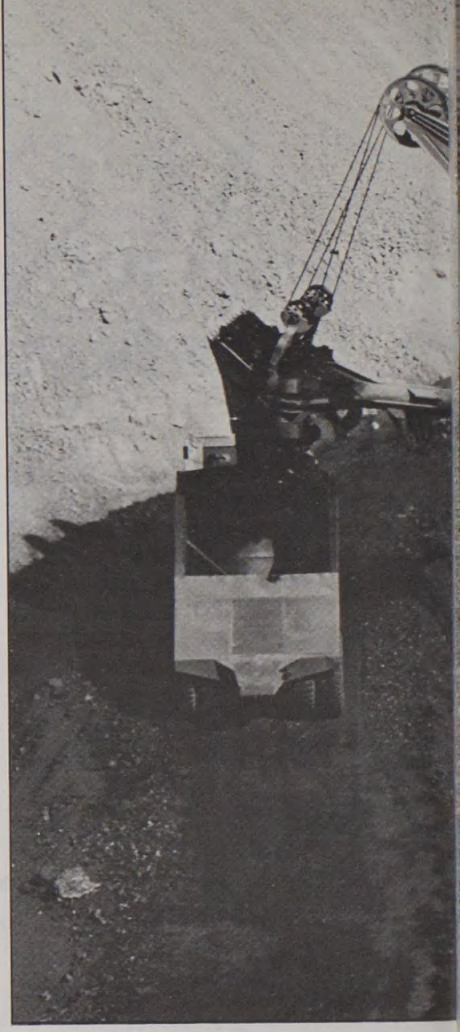
PAUL E. POLZIN

Montana's Troubled Coal Industry

A 1986 Update



House Bill 607, passed by the 1985 Montana Legislature, provides a "window of opportunity" for coal producers because it temporarily reduces by one-third the state's coal severance tax on new tonnages sold or contracted between January 1, 1985 and June 30, 1987. The purpose of the legislation was to "challenge the coal industry to find new markets and customers for Montana coal," while at the same time "maintaining the present tax base on current Montana coal production."

Coal eligible for the lower tax must be sold to a new customer or exceed the "base level of consumption" for an existing customer. Base consumption levels for current purchasers are the greater of: (a) the average of the annual tonnages bought during 1983 and 1984; or (b) 90 percent of the maximum tonnages provided in existing contracts, if minimum contract deliveries have never been met. Sales to an existing customer would be eligible for the reduced severance tax only if they exceed its base consumption level.

A survey of all Montana coal producers conducted by the Bureau of Business and Economic Research in July 1986 revealed a number of new sales, which are summarized in table 1. In addition, the coal producers reported several other sales currently under negotiation, but the details are not yet available.

How successful has the "window of opportunity" been? Taken together, these sales amount to about 2 million tons in 1986, and about 3 million tons in 1987 and 1988, or about 10 percent of Montana's annual coal production. Is that a reasonable response to a one-third reduction in the severance tax? These and other questions cannot be answered until we put things into perspective by examining the underlying conditions affecting recent trends in Montana's coal industry.

A December 1984 study of the Montana coal industry funded by the Montana International Trade Commission, reprinted in the Summer 1985 issue of the *Montana Business Quarterly,* described the characteristics of this industry and presented an overview of the underlying factors affecting production and sales. We will first summarize this study and then update the information by reviewing recent trends.

The major topics of the 1984 report included: an analysis of the importance of coal mining for Montana's economy; an identification of Montana's coal market area; and a presentation of important factors which would influence future trends in coal production. A short summary of each topic is presented in the following section.

Photo, left, and on cover courtesy of Western Energy Company, Butte, Montana.

The 1984 Study of Montana's Coal Industry

Contribution of coal mining to Montana's economy

In 1984 we reported that coal mining is a significant component of Montana's economic base. It continues to be. The approximately 1,400 jobs and about $50 million payroll it provides account for between 1.4 and 3.6 percent of Montana's economic base, depending how the economic base is measured. Coal mining jobs are steady and pay well. During 1985, they averaged about $37,000 in wages and salaries and were mostly year-round jobs which are less affected by national business cycles than employment in some other basic industries in the state. In comparison, the average wage and salary job in Montana paid about $15,000 in 1985.

Montana's coal market area

Montana coal is almost exclusively burned as boiler fuel to generate electricity. Although significant amounts are burned by instate generating plants — primarily at Colstrip — most Montana coal is shipped via unit trains to the Midwest.

The demand for Montana's coal, and other forms of boiler fuel, is determined by the delivered price per unit of energy. The delivered price of fuel to a generating plant is determined by many complex and subtle factors resulting from extensive negotiations between the mine, the utility, and the railroad. By making some assumptions based on conditions as they existed in 1984, we identified the region for which Montana was the least cost source of coal. This is Montana's coal market area, and it is pictured in figure 1. The calculated market area conformed closely to reality because the rare sale of Montana coal outside this region, and the few Wyoming sales within it, could all be explained by extenuating circumstances, such as the precise coal requirements of individual generating plants.

The 1984 outlook for Montana coal production

The 1984 report presented a number of factors which would influence future trends in the demand for Montana coal. Taken together they painted a gloomy picture of an industry facing slow demand growth, increasing competition, and the potential for a declining base of secure long-term contracts.

Shrinking coal market. A number of events were identified which would affect the competitiveness of Montana coal and, in effect, reduce Montana's coal market area as shown in figure 1. The major impact would be a

"During 1985, [coal mining jobs] averaged about $37,000 in wages and salaries and were mostly year-round jobs which are less affected by national business cycles than employment in some other basic industries in the state."

northward shift in the boundaries in Minnesota and Wisconsin. These events, as described in 1984 included:

(1) Scheduled reduction of Wyoming's coal severance tax.
(2) A second railroad serving Wyoming's coalfields, leading to lower rail rates for Wyoming producers.
(3) New Wyoming coal mines closer to the Upper Midwest market, with higher quality coal.
(4) A revised formula to calculate federal coal royalties.
(5) Increases in mining costs which are to the disadvantage of Montana coal.

Expiration of existing contracts. We reported in 1984 that five major contracts for Montana coal are scheduled to expire before 1995. These contracts total about 15.4 million tons per year. All are with utilities in Minnesota and southern Wisconsin, the very region where competition between Montana and Wyoming coal producers is most intense. Therefore, it is not certain that these contracts will be renewed.

New generating plants. Due to the current surplus, electrical generating capacity throughout the nation will grow slower than demand. There were only two coal-fired generating plants on the drawing boards in Montana's coal market area in 1984. One is under construction north of Minneapolis and scheduled to be in production in 1988. The other is still in the very early planning stages. It could be located in northern or central Wisconsin or could even be a mine-mouth plant in North Dakota that would burn lignite. It will not be completed before 1994. The new plant near Minneapolis, the "Sherco 3" plant, would burn about 3.0 million tons per year.

Table 1
New Coal Sales, Montana, by Producer and Purchaser

Producer	Purchaser	Terms	Comments
Decker Coal Co.	Commonwealth Edison of Chicago	1.5 million tons in 1985. 1.5 to 3.0 million tons in 1986, 1987, and 1988.	Coal from existing contracts with Kiewit Co. formerly scheduled for Wyoming mines.
NERCO Coal Co. (Spring Creek Mine)	Detroit Edison Co.	Spot sale. 600 thousand tons or more in 1986.	Amount eligible for lower tax still uncertain. Future sales possible if price is right.
Western Energy Co.	AEM Corporation	225-350 thousand tons per year, beginning when plant completed. Fifteen-year contract with renewal option.	New purchaser. Coal liquefaction plant to be built near Colstrip.
Western Energy Co.	Northern States Power Co.	Existing contract extended from 1995 to 2000. Authorized deliveries 1.1 million tons per year above current contract.	No minimum tonnage associated with expanded volume. Tonnages above base consumption level eligible for reduced tax rate.
Westmoreland Resources, Inc.	Western Fuels Association for its member Southern Minnesota Power Authority	1.0 million tons per year beginning in 1988. Twenty-year contract with 3 year reopeners.	New purchaser. This is the 41% of Sherco 3 not owned by the Northern States Power Co. Contract not yet signed.

Recent Developments

The demand for Montana coal has generally followed the pattern suggested in the 1984 report. There have, however, been new developments in the last two years which will slightly modify these trends.

Price of coal

There continues to be significant overcapacity among coal producers throughout the Powder River Basin. While current published prices are about the same as in 1984, there may in fact be reductions offered in some cases.

Current published prices for Wyoming coal on contract are about $6.25 per ton FOB mine. Recent reports giving the total delivered cost to Minnesota from a number of Wyoming mines are consistent with prices of about $5.00 per ton FOB mine.

Montana-North published prices remain at about $9.75 per ton FOB mine. The apparent stability of the Montana price may be deceptive, however, because there has been no reported sale on which to base a revised price.

Increased attractiveness of "compliance coal"

In response to the acid rain problem, midwestern states are establishing limits to the amount of sulfur-dioxide (SO_2) which can be emitted into the atmosphere. Wisconsin has already passed such legislation; Minnesota and Michigan are not far behind. The new Wisconsin regulations place an absolute limit on SO_2 emission. This increases the attractiveness of low sulfur coal. Only the Decker and Spring Creek mines have the relatively low sulfur content to match that of Wyoming coal.

"The decline in the world price of oil has led to increased use of oil-fired generating capacity."

Plummeting oil prices and cheap Canadian hydro power

The decline in the world price of oil has led to increased use of oil-fired generating capacity. While coal continues to be used for most base-load generation, the increasing relative attractiveness of using idle oil-fired generation capacity certainly further depresses the overall demand for coal. In addition, inexpensive Canadian hydro power is being offered for sale in the Upper Midwest, Montana's major coal market. These factors, along with slow growth of electricity demand, and the increased attractiveness of Wyoming coal in some cases, have kept sales to current customers below historic levels. This suggests that most of Montana's existing coal customers will not be eligible for the reduced severance tax because purchases will remain at or below the base consumption levels.

Increased rail competition

The Chicago and Northwestern Railroad (C&NW) and the Union Pacific (UP) have combined to offer rail service between the Wyoming coalfields and the Upper Midwest. Competition between the Burlington Northern (BN) and the C&NW/UP rail conglomerate has reduced rail rates for both Montana and Wyoming coal originating in the Powder River Basin. Because they are negotiated on a case by case basis, little reliable data concerning rail rates are available. It appears, however, that rates in the neighborhood of $0.015 per ton/mile may be available to Powder River Basin coal producers. But the length of the haul, the precise source and destination, and other factors may influence the final outcome of each negotiation.

Even though the lower rates are available to all Powder River Basin coal producers, they generally favor Wyoming mines more than those in Montana. Rail distances to the Upper Midwest are proportionally greater for Wyoming mines, and they therefore enjoy correspondingly greater reduction in delivered costs.

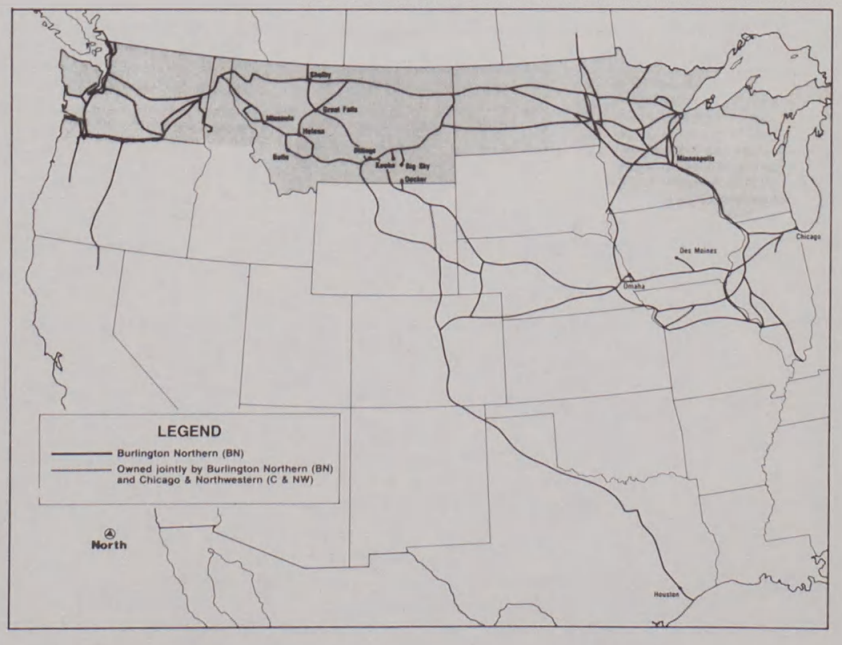
The C&NW/UP conglomerate offers most Wyoming mines in the Powder River Basin shorter rail mileage than the BN to much of the Upper Midwest. The BN, however, may upgrade certain of its routes for use by coal trains, which would result in rail distances roughly equal to those of the C&NW/UP.

Flexible coal purchasing agreements

In order to take advantage of the depressed market, certain large purchasers appear to be developing flexible supply systems using alternative coal sources. Specifically, a purchaser may sign a number of coal contracts with different producers, each with a high maximum and a low minimum annual tonnage. Then, each year the purchaser may satisfy his needs at minimum cost by choosing from among the various sources. This purchasing strategy would be favorable for utilities such as Northern States Power in Minnesota and Commonwealth Edison of Chicago. They have generating plants near the border of the Montana-Wyoming coal market areas, and they can use coal from either state. The sale of coal from Decker to Commonwealth Edison cited earlier may be an example of this strategy; the coal was to be supplied by Peter Kiewit Co. mines in Wyoming, but instead was transferred to the Kiewit Decker Mine in Montana. This is one of the sales eligible for the reduced coal severance tax rate.

Other such arrangements could be unfavorable to Montana. Northern States Power, for example, has contracts with both Montana and Wyoming mines, and could switch production to Wyoming if lower delivered costs would result. Recent events suggest that Northern States Power may, in fact, be implementing such a strategy because of the announced cutback in deliveries from two Montana mines, and the increased purchases from Wyoming mines.

Figure 1
Montana's Coal Market Area
1984



"These calculations demonstrate that Montana's coal market area has been reduced. . . ."

Montana's Shrinking Coal Market Area: The Cost of Coal Delivered to Minneapolis

The impact of changing conditions on the demand for Montana coal may be illustrated by examining the calculated delivered cost to Minneapolis. A summary of these calculations is presented in table 2.

Based on conditions as they existed in 1984, Montana was the cheapest source of coal delivered to Minneapolis. Despite a higher FOB mine price, the shorter rail distance and slightly higher heat content resulted in a delivered price of $1.48 per energy unit for Montana coal, as compared to $1.67 per energy unit for Wyoming coal mined near Gillette. In other words, Montana coal in 1984 enjoyed about a $0.19 per energy unit price advantage.

The second set of calculations reflects conditions as they existed in July 1986. Because of the uncertainties concerning prices, the calculations are presented for several FOB minesite prices for both Montana and Wyoming coal. The $9.75 figure for Montana reflects the published price, while $9.00 per ton is a rough estimate of the price available to a purchaser eligible for the reduced severance tax rate. For Wyoming, $6.25 a ton is the current published price, while $5.00 per ton is consistent with reports of the delivered cost. The rail mileages remain unchanged from the 1984 study, but the transportation costs were computed using the new rate of $0.015 per ton mile. These new assumptions yield a delivered price of $1.21 to $1.25 per energy unit for Montana coal depending on whether the customer was eligible for the reduced severance tax rate. For Wyoming coal mined near Gillette, the delivered costs were from $1.26 to $1.34 per energy unit. Montana still has the least delivered cost, but the advantage has dropped from $0.19 per energy unit in 1984 to $0.01 to $0.13 per energy unit in 1986.

The cost comparisons based on Wyoming coal mined near Gillette may be too favorable to Montana. The calculated delivered costs for the Black Thunder Mine are also presented in table 2; this is one of the mines for which published delivered cost data are consistent with a $5.00 per ton FOB mine price. The Black Thunder Mine is located south of Gillette, and therefore closer than Gillette mines via rail to the Midwest, and can ship via the C&NW/UP railroads. This results in a reduction of roughly 120 rail miles. In addition, the heat content of Black Thunder coal is greater than the deposits near Gillette. Taken together, the shorter rail distance and higher heat content result in a calculated delivered cost of $1.09 to $1.16 per energy unit, depending on the FOB mine price. In other words, the delivered price of coal per energy unit from the Black Thunder Mine is less than that from Montana. This is not an isolated example; there are other Wyoming mines with similar characteristics which could also supply Upper Midwest customers with delivered costs equal to or less than those of the Black Thunder Mine.

The coal from the Black Thunder Mine has a lower sulfur content than the Montana-North coal. This suggests that, prices being equal, the Wyoming coal may be preferred because of its advantages to the purchaser in complying with Minnesota's sulfur dioxide (SO_2) emission limits.

The purpose here was not to precisely calculate the delivered cost of coal. We have not, for example, taken into account the subtleties and nuances that are an integral part of the negotiation process. Rather, the intent was to illustrate the impact of recent trends on the potential demand for Montana coal. These calculations do demonstrate that Montana's coal market area has been reduced, and that customers which formerly bought only from Montana mines now purchase from Wyoming mines.

Table 2
Comparative Cost of Coal Delivered to Minneapolis, Minnesota

Coal Source	FOB Mine Price ($/ton)	+ Transportation Cost	= Delivered Price ($/ton)	÷ Heat Content (mm BTU/ton)	= Delivered Price ($/mm BTU)
		November 1984			
MT-North[a]	$9.75	788 miles @ $0.020/mi=$15.76	$25.51	17.2	$1.48
WYO-Gillette	6.40	1,062 miles @ $0.020/mi= 21.24	27.64	16.6	1.67
		July 1986			
MT-North	$9.75	788 miles @ $0.015/mi=$11.82	$21.57	17.2	$1.25
MT-North	9.00[b]	788 miles @ $0.015/mi= 11.82	20.82	17.2	1.21
WYO-Gillette	$6.25	1,062 miles @ $0.015/mi=$15.93	$22.18	16.6	1.34
WYO-Gillette	5.00	1,062 miles @ $0.015/mi= 15.93	20.93	16.6	1.26
WYO-Black Thunder	$6.25	940 miles @ $0.015/mi=$14.10	$20.35	17.6	1.16
WYO-Black Thunder	5.00	940 miles @ 0.015/mi= 14.10	19.10	17.6	1.09

[a]Montana North includes the Western Energy, Westmoreland, and Peabody mines.

[b]Estimated. Last published FOB mine price adjusted for reduction in coal severance tax.

". . . customers which formerly bought only from Montana mines now purchase from Wyoming mines."

Outlook for Montana Coal Production

Since most Montana coal is sold under long-term contracts, the provisions of these agreements provide a good starting point for examining the outlook for future coal production. Before proceeding, however, it must be pointed out that these contracts do not provide ironclad guarantees. Most contain sections which allow both parties considerable leeway; examples include maximum and minimum annual tonnages, cancellation and buyout options, and provisions for reopening negotiations if certain conditions are (or are not) met.

The actual and projected production associated with each major contract is presented in table 3. The contracts scheduled to expire before 1993 were assumed to be renewed at current production levels. Actual coal production in Montana during 1985 was slightly larger (less than one million tons) than the total reported in table 3 because of several small sales not associated with these contracts.

Coal production associated with these major contracts is projected to be about 32.16 million tons in 1986, rise to 34.46 million tons in 1987, and then peak at 36.91 million tons in 1988. From 1989 to 1993, production is projected to average about 33 million tons per year. The projected decline between 1988 and 1989 is mostly due to the completion of the reserved and deferred sales to the Detroit Edison Co. from the Decker Coal Mine.

Glancing down the figures for the contracts reveals that in almost every case the projected production is less than the base consumption levels for the major coal purchasers. This suggests that most of Montana's current coal customers would not be eligible for the reduced coal severance tax rate if, for one reason or another, they wanted to increase their

Table 3
Actual and Projected Demand for Montana Coal by Mining Firm and Purchaser

	Contract Expiration Date	Base Consumption Level	Millions of Tons								
			Actual 1985	1986	1987	1988	1989	1990	1991	1992	1993
Decker Coal Co.			11.50	12.60	13.80	14.50	10.80	10.90	10.50	11.00	11.00
Commonwealth Edison Co.	1997	3.96									
Detroit Edison Co.	2004	7.92									
Lower Colorado River Authority[a]	2003	1.98									
Knife River Coal Co.			.22	.23	.19	.19	.19	.20	.20	.20	.20
Holly Sugar Co.	1986	.02	.04	.04	0	0	0	0	0	0	0
Montana-Dakota Utilities	1993	.20	.18	.19	.19	.19	.19	.20	.20	.20	.20
Peabody Coal Co.			3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15
Minnesota Power and Light	1993	3.06	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15
NERCO Coal Co. (Spring Creek)			2.80	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Utility Fuels, Inc.	2004	6.99	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10
Other purchasers		N/A	.70	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Western Energy Co.			11.60	10.04	11.13	11.88	11.88	11.50	11.50	11.50	11.50
Upper Peninsula Generating Co.	1999	.27	.16	.04	.10	.10	.10	.10	.10	.10	.10
Colstrip 1 and 2	2009	2.07	2.80	2.04	2.20	2.20	2.20	2.20	2.20	2.20	2.20
Colstrip 3 and 4	2019	5.40	2.15	3.40	4.30	4.30	4.30	4.30	4.30	4.30	4.30
Lake Superior District Power Co.	1995	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
Northern States Power Co.	2000	4.05	4.30	2.65	2.50	3.00	3.00	3.00	3.00	3.00	3.00
Wisconsin Power & Light Co.	1994	1.77	1.63	1.51	1.60	1.60	1.60	1.60	1.60	1.60	1.60
Montana Power Co. (Corette)	1989	.63	.51	.35	.38	.38	.38	0	0	0	0
AEM Co.	2003	N/A	0	0	0	.25	.25	.25	.25	.25	.25
Westmoreland Resources, Inc.			3.04	2.94	2.99	3.99	3.99	3.99	3.99	3.99	3.99
Northern States Power Co.	1993	2.61	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30
Dairyland Power Coop.	1993	.45	.45	.45	.50	.50	.50	.50	.50	.50	.50
Wisconsin Power and Light Co.	1993	.16	.15	.15	.15	.15	.15	.15	.15	.15	.15
Interstate Power Co.	1993	.27	0	0	0	0	0	0	0	0	0
Upper Peninsula Generating Co.	1991	.25	.14	.04	.04	.04	.04	.04	.04	.04	.04
Western Fuels Assoc. (Sherco 3)	2008	N/A	0	0	0	1.00	1.00	1.00	1.00	1.00	1.00
TOTAL			32.31	32.16	34.46	36.91	33.21	32.94	32.54	33.04	33.04

[a]No current shipments. Contract in litigation.

N/A denotes not applicable.

NOTES: Most coal contracts stipulate maximum and minimum annual tonnages. Figures presented here represent, for the most part, the midpoint between these limits, and may not precisely reflect tonnages for a particular year.

"One of the major problems facing Montana's coal industry is a declining base of long-term contracts, specifically, the contracts with Minnesota and Wisconsin utilities that are scheduled to expire by 1995."

purchases from a Montana mine.

The problem with expiring contracts still remains. Agreements calling for about 8.5 million tons per year are scheduled to expire by 1995. As noted earlier, almost all the purchasers are in Wisconsin and Minnesota and, given the delivered costs and other factors mentioned earlier, they may well switch to Wyoming coal. In the last two years, one agreement has been renewed; the contract between Western Energy Co. and the Northern States Power Co. has been extended to 2000, but the tonnages have been reduced from the figure projected in 1984.

Summary

To summarize, we'll evaluate the impact of H.B. 607, the "window of opportunity." First, we need to eliminate those factors which are beyond the scope of this legislation.

One of the major problems facing Montana's coal industry is a declining base of long-term contracts, specifically, the contracts with Minnesota and Wisconsin utilities that are scheduled to expire by 1995. H.B. 607 was not intended to help renew existing contracts which did not exceed historic consumption levels. The loss of these contracts would be a significant problem, but this legislation was not designed to help in this case.

Also, one cannot blame H.B. 607 for the deteriorating coal market. It was not responsible for the declining world price of oil, the availability of Canadian hydropower, the acid rain legislation, and other factors.

If we dismiss the items over which it had no control, the performance of this legislation appears to have been somewhat successful. Sherco 3 is the only new generating plant being built in Montana's coal market area. About 41 percent of the coal for this plant is certain to come from a Montana mine. Also, Montana has not been eliminated as the source for the remaining portion, which will be purchased by Northern States Power Company. In addition, H.B. 607 allowed coal purchasers and sellers increased flexibility to take advantage of the lower rates. The transfer of the Commonwealth Edison sales from Wyoming to Montana mines is an example.

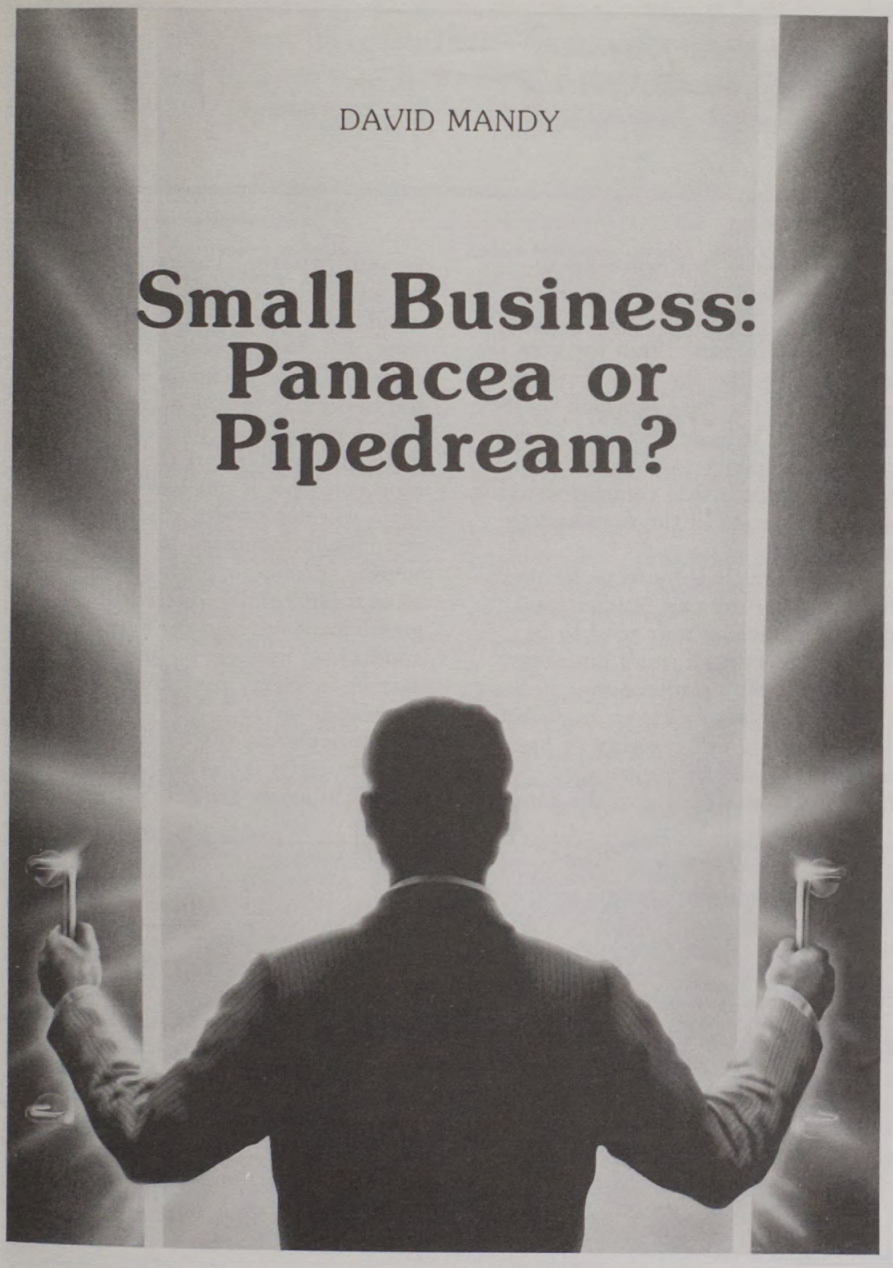
Also, those purchasers that are eligible are buying Montana coal on a spot basis to fulfill their short-run needs. The Detroit Edison sale is one example.

Turning to the future, Montanans must realize that the coal market is changing. It is now a buyer's market. The days of long-term secure contracts are probably numbered. The factors which gave us the Commonwealth Edison and the Detroit Edison tonnages could also work against Montana. For example, the Northern States Power Co. could transfer some of its tonnages to Wyoming to minimize its costs. □

Paul E. Polzin is director of forecasting for the Bureau of Business and Economic Research, University of Montana, Missoula. He is also a professor of management in UM's School of Business Administration.

DAVID MANDY

Small Business: Panacea or Pipedream?



The nation's shift from an industrial to a so-called "service" economy has received much attention lately. An offshoot has been advice by some that states focus their economic development efforts on smaller firms, since most new jobs created in the United States in recent years have been in small businesses. This article, reprinted from the April 1986 issue of the Illinois Business Review, *argues that limiting development efforts to small businesses may be shortsighted.*

The section on the Montana situation has been added, as has the table on Montana business establishments. Our thanks to the Bureau of Economic and Business Research at the University of Illinois, publishers of the IBR, *for reprint permission.*

Recently, the contribution of small businesses to the overall health of an economy has been the focus of much discussion. One finding of investigations is that small businesses are responsible for creating a large proportion of new jobs. This is often interpreted as evidence that state and local governments should provide additional support for small business.

This article issues a word of caution about the assumption that the economic well-being of a state would be served by subsidies in which size is an important consideration. In order for incentives to be directed toward the most effective targets, policy-makers must understand the role of all types of business. Government should focus attention on those businesses that yield the greatest return in the form of increased employment and income per tax dollar of subsidy. Moreover, it is critically important to measure this return in terms of employment and income that *would not have existed* without government assistance.

The *MIT Program on Neighborhood and Regional Change* has produced large amounts of data on small businesses. David Birch presents the MIT analysis in several articles that provide one foundation for the present inquiry. Other published sources include "Small Business: Jobs, Ideas and Products" in the March 1985 issue of *Illinois Issues,* "Tracking Job Growth in Private Industry" in the September 1982 issue of the *Monthly Labor Review,* and the annual *Inc.* magazine study on state business climates.

One widely publicized finding of that research relates to the dominant role small business seems to play in the process of new job creation. David Birch notes that 67 percent of the new jobs created in their sample were created by firms with 20 or fewer employees. Firms with 100 or fewer employees account for 80 percent of new job creation. The magnitude of these figures has become generally accepted, as other research has drawn similar conclusions.

Basic and derivative firms

It may be helpful to draw distinctions between types of firms, basic and derivative. Basic or export firms constitute the economic base of a state

"Economic growth would be most meaningfully fostered if government reduced the cost of conducting business for the firms that face an economy consisting of other geographic areas."

or region. The demand for their products may arise from a geographic area different from the actual physical location of the firm. Hence, such firms can locate in many different areas nationally and, perhaps, internationally. It can be argued that their presence creates the need for other firms. Derivative firms are more local in nature and do not engage in a large amount of trade outside of their geographic location. They serve the existing population and industry.

It is important to understand the difficulty of categorizing businesses in this way. A fine restaurant, for example, superficially appears to be a derivative firm. However, if the restaurant is outstanding in the quality of its service, the physical location of it may be relatively unimportant. The restaurant may succeed in attracting clientele from a large surrounding area solely on the quality of its product. Alternatively, a restaurant may fail as a business due to a poor location. Thus, the categorization of basic and derivative is useful for expository purposes but ignores some important facts. The basic firm has a wide range of location options, however, whereas the derivative firm arises to fill a need in a particular geographic area.

Supporting the economic base

Programs that reduce the cost of conducting business may serve to expand employment or income in a state or area. These programs can be tailored to specific types and sizes of firms. It is our view that firms of a basic nature hold the greatest promise. Such firms conduct interstate business, thereby drawing income and wealth into the state. The derivative firms, which serve the needs of the area, will arise in an area without further incentive. Their only prerequisite is that adequate local demand be present to support them. We do not mean to imply that any individual firm must locate in a particular area — only that if the demand for a local service is sufficient, some firm will arise to fulfill the need. Hence, support of basic firms yields multiplied returns as the income imported into the area is spent locally and the area grows by building on the base provided by the basic firms. If basic firms are present, it is not necessary to provide further support to firms that conduct the bulk of their business in the surrounding community.

We believe that the focus on small business obscures this fundamental principle. Policies may tend to be targeted toward all small businesses instead of being targeted toward basic firms. Undoubtedly many small firms will fall under our category of basic and thus should be encouraged. Many large businesses belong to the category as well, however. The fact that 80 percent of job creation takes place in small firms is irrelevant to the real issue. All that is needed is sufficient demand in the economy within which the particular firm operates (whether it be international, national, regional, or local). Similarly, if the necessary economic base is not present these firms will not survive unless they are continually supported by outside sources. Economic growth would be most meaningfully fostered if government reduced the cost of conducting business for the firms that face an economy consisting of other geographic areas.

Compounding the confusion over small business is the fact that many small businesses are actually derivative

Table 1
Montana Employment and Establishments by Industry as of March 1984

	Employees	Establishments	Average Number of Employees
Agricultural services, forestry, fisheries	1,145	297	4
Mining			
Metal mining	1,067	47	23
Coal	1,054	14	75
Oil and gas	3,653	337	11
Nonmetallic	716	36	20
Construction			
Heavy construction	2,353	228	10
Other	8,439	2,061	4
Manufacturing			
Wood products and paper[a]	6,978	143	49
Chemicals	697	26	27
Petroleum products	750	8	94
Primary metals[b]	1,500	18	83
Other	11,585	970	12
Transportation and public utilities (excluding railroads)			
Transportation	7,493	884	8
Communication	4,204	219	19
Electric, gas, sanitary services	4,343	214	20
Wholesale trade	16,434	1,860	9
Retail trade	56,489	6,742	8
Finance, insurance, real estate	13,958	1,973	7
Services	57,044	7,094	8

SOURCE: U.S. Department of Commerce, Bureau of the Census, County Business Patterns 1984: Montana, CBP-84-28, December 1985.

[a]Excludes logging camps.

[b]From Montana Department of Labor and Industry; annual average.

"This analysis, then, suggests that it is usually manufacturing and mining firms that should be fostered by state and local governments since they represent basic industries."

firms. The services industries, in particular, are composed mostly of small firms that serve local needs and that rely on the income generated by a large employer in the area for support. The local grocery stores, restaurants, barbers, doctors, lawyers, accountants, and so on will all arise in response to demand in a quantity sufficient to suit the needs and wealth of the community. There is no reason to expend state resources to encourage this type of business. Retail and some wholesale trade also fall into this category, yet in the MIT sample 72 percent of the new jobs were generated in these industries — industries that, as a general rule, serve the existing population and, therefore, should not receive support from state and local governments.

The Montana situation

Table 1 presents the average number of employees per business establishment in Montana in 1984, by industry category. From this it is clear that the larger fims in the state are concentrated in mining and manufacturing while most of the other industry categories include relatively smaller businesses.

This grouping is roughly equivalent to that arrived at if industries were classified as basic or derivative. Among the industries listed, manufacturing and mining are generally basic industries. So is heavy construction, although firms in that industry tend to be smaller. Two other basic industries — railroads and agriculture — are not included in the table because comparable data are not available. Agriculture is a significant exception to the rule that basic industries generally consist of larger firms.

The other industries included in table 1 — other construction, nonrail transportation and utilities, wholesale and retail trade, finance, and services — are predominantly derivative, and generally employ fewer people per establishment. Individual firms within those industries can be either basic or derivative, depending upon the markets they serve.

This analysis, then, suggests that it is usually manufacturing and mining firms that should be fostered by state and local governments since they represent basic industries. In general, these firms are not small businesses.

Montana should carefully examine how it decides which firms to target for business assistance. If the net payoff is positive, the state should support basic industries, regardless of the size of the firm. This will include some small businesses, such as trade and service establishments serving out-of-state travelers, and some larger firms, especially in manufacturing and mining. □

David Mandy recently finished his Ph.D. degree in economics at the University of Illinois. He is now research assistant professor at the University of Tennessee, where he is affiliated with the Center for Business and Economic Research.

MARY L. LENIHAN

The Consumer Outlook: Favorable but Cautious

Despite the bad fiscal news from Helena during May and June, Montana consumers felt good about some aspects of the economy. Probably buoyed by reduced oil prices and the lowest interest rates of the 1980s, their evaluation of the housing and automobile markets was the rosiest in years.

That's according to the Montana Poll, which is conducted by the Bureau of Business and Economic Research and cosponsored by the *Great Falls Tribune*. This Poll questioned 404 adult Montanans by telephone between May 27 and June 9.

The Montana Index of Consumer Sentiment, which measures overall consumer attitudes, showed a modest turn for the better over the preceding six months, but the improvement was much less pronounced than in the assessment of the housing and automobile markets. The Index is compiled in conjunction with the Poll and measures how Montanans feel about the state's economic outlook as a whole. Montana consumers, particularly those in the eastern part of the state, were apparently more restrained in their overall view of the economy in June.

Since the Poll began in December 1981, Montanans had never felt as positive about the housing and automobile markets as they did in June (table 1). In December 1985, 60 percent of those polled felt the coming year would be a good time to buy a home. In the most recent Poll, that proportion increased to nearly three-fourths. The proportion of those with a negative outlook fell, from about one-fourth in December 1985 to only 16 percent in June. These were the highest, and lowest, proportions recorded since the Poll began. The previous high came three years earlier, when Montanans were encouraged by the nation's emergence from the recession.

The attitude toward carbuying also was very positive. Sixty-one percent said the coming twelve months would be a good time to buy a new or used automobile. Only about one-fifth — 21 percent — disagreed. As was the case in homebuying, these were the most favorable proportions recorded since mid-1983.

A cross-section of Montanans shared the rosy attitude, but certain groups were even more pronounced in their optimism for both the auto and housing markets. Montanans living in the seven most populous counties (Cascade, Flathead, Gallatin, Lewis and Clark, Missoula, Silver Bow, and Yellowstone), the so-called baby boomers (those between the ages of twenty-one and thirty-nine), those with at least some college education, and those with 1985 household incomes of $35,000 or more were inclined to be especially optimistic. Other factors, such as one's political preferences, did not make a difference.

The Index: A cautious outlook

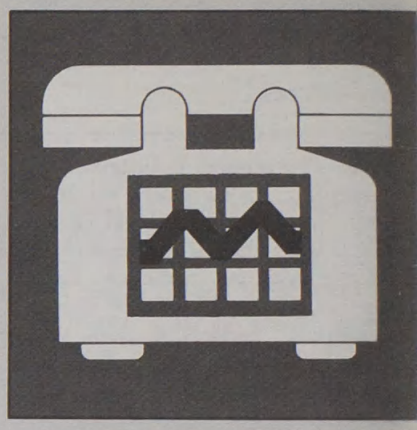
The Montana Index of Consumer Sentiment showed a small improvement in June over December 1985 (table 2). First computed in late 1982, the Index is a composite measure based on how Montanans view some consumer markets, their own economic situation, and the outlook for the state as a whole. Attitudes toward carbuying and homebuying are not included in the Index.

Table 2
Montana Index of Consumer Sentiment

June 1986	96.6
December 1985	93.0
June 1985	100.2
December 1984	110.0
June 1984	112.5
December 1983	116.0
June 1983	116.0
November 1982	100.0

The overall consumer sentiment as shown by the Index has not been as rosy as attitudes toward the home and auto markets. The Index remained at relatively high levels during 1983 and 1984 as Montanans assessed their own and the state's economic situation in light of the recovery from the recession. In June 1985 the Index showed a pronounced drop, and it fell again in December. The latest numbers showed a modest upturn. A similar index, computed by the University of Michigan, showed a comparable trend at the national level, though the recent changes have not been as sharp.

The reason for last year's drop in the Montana Index, and the reason why the recent improvement was small, is that Montanans are less sure of the state's short- and long-term prospects than they were in the 1983-84 post-recession period. The proportion who view the outlook for Montana's economy for the next twelve months and the next five years as favorable has declined significantly since 1983. The latest Poll showed some improvement in the short-term



THE MONTANA POLL

The Montana Poll is cosponsored by the Great Falls Tribune *and the Bureau of Business and Economic Research, University of Montana. The quarterly Poll, conducted by the Bureau and directed by Susan Selig Wallwork, is based on a minimum of 400 telephone interviews with Montanans aged eighteen and older. The interviews are conducted by Bureau interviewers from its offices on the University campus in Missoula. Telephone numbers are randomly generated by computer, using*

1986-87

Guide to SERVICES

BUREAU OF BUSINESS AND ECONOMIC RESEARCH

UNIVERSITY OF MONTANA

When the Bureau of Business and Economic Research opened its doors almost forty years ago, its main focus was analysis of Montana's statewide and local economies. Today, while the economic analysis is more solid than ever, the Bureau has expanded its repertoire of services to become a multi-faceted research and public service agency.

The Bureau is an arm of the School of Business Administration at the University of Montana. Throughout the years it has conducted research on a variety of economic and business-oriented issues, and then passed that information on to Montanans of all types: public officials, business executives, and private individuals.

As Montana's business and economic environment has changed over the years, the Bureau has attempted to provide services and information better suited to today's business climate. For example, while the Bureau has always provided current information and analysis on Montana's employment and income levels, projections of the same were rarely available. So the Bureau developed the comprehensive Economics Montana forecasting system to project these figures for several years into the future. Currently projections are at the statewide level.

The Bureau has also followed the ups and downs of Montana's major industries, and what effect those industries have on the state economy. In recent years, while keeping an eye on the entire economy, the Bureau has become the primary source of information on one specific industry — forest products. An important key to Montana's economy, forest products is even more vital to western Montana. The Bureau monitors the industry's performance on a regular basis.

The fast-growing area of survey research and public polling has also been actively pursued by the Bureau. With the legislature, private business, and state and federal agencies frequently making decisions affecting all Montanans, Montanans' opinions on issues are sought after and used in the decision process. Through the years the Bureau has developed its survey research division until today it is capable of handling all types of surveys.

These are just some of the services the Bureau has developed for Montanans. You'll read about more in this pamphlet which was designed to introduce, or refamiliarize, you with the Bureau of Business and Economic Research. One note of explanation: while the Bureau does some basic in-house research, many research projects are the result of a contract between the Bureau and a client to study a specific topic. Over the years the Bureau's clients have included the U.S. Forest Service, Montana Board of Housing, Montana International Trade Commission, Montana Department of Fish, Wildlife, and Parks, Champion International, *Great Falls Tribune*, and Western Environmental Trade Association. Reports and articles, most of which are available to the public for a nominal fee, describe and summarize most of these projects. More information on Bureau publications is also contained in this pamphlet. We hope that after reading about the Bureau in more detail, you will call on us if we can be of service to you.

1986-87

Guide to SERVICES

1 STATE AND LOCAL ECONOMIC ANALYSIS

The Bureau has long been recognized as a major source of information on Montana's state and local economies. It monitors all aspects of the state economy — looking at major industries and their effect on the economy plus keeping tabs on Montana's people, where they live and work.

Each year the Bureau conducts an analysis of the state in general as well as of its major urban areas — Missoula, Great Falls, Billings, and Helena. Other areas the Bureau has researched include the Flathead Valley, Bozeman, Butte-Anaconda, Havre, and Ravalli and Rosebud counties.

The Bureau also undertakes a number of projects focusing on the role of a specific industry in the state or local economy. The Bureau's continuing emphasis is on the state's forest products industry (see item #3 on this page). But the Bureau has also studied the state's coal, nonfuels mineral, and health care industries. An analysis of the Missoula area trucking industry was completed not long ago. A look at retail trade in major Montana cities was the focus of yet another Bureau analysis.

Most of the Bureau's research results are published in either individual reports or are summarized in the *Montana Business Quarterly*, the Bureau's regular publication.

2 ECONOMICS MONTANA

A natural evolution of the Bureau's economic analysis capabilities resulted in the Economics Montana forecasting program. Begun in 1983, the program was initially funded by the Montana Legislature. When funding was not renewed, Mountain Bell provided a generous grant to help the Bureau continue the program. Economics Montana projects income and employment figures for the state. While current income and employment information was readily available at the state level, projections were not, and that was one of the reasons Economics Montana was developed.

Projections from Economics Montana are released on a regular basis, and the Bureau publishes a free pamphlet containing the latest information and a brief analysis. The projections are also released to the media and are regularly reported in Montana newspapers and newscasts.

3 FOREST PRODUCTS RESEARCH

A mainstay of Bureau operations, forest products research has grown from a single analysis of the Montana industry into comprehensive studies of the Montana, Wyoming, and Idaho industries. Substantial work has also been done on the operations of the industry in Arizona, Colorado, and Wyoming. In cooperation with the U.S. Forest Service, the Bureau developed the Forest Industries Data Collection System (FIDACS) to survey forest products firms in western states. About every five years the Bureau conducts a census of Montana and Idaho firms and publishes a comprehensive report for each state. The Forest Service, utilizing FIDACS, conducts the research in the other states. The information is then stored at the Bureau.

FIDACS produces large amounts of information never before gathered. Data on the structure of the industry — number and size of mills and types of products produced — are available. Also available is information on source and ownership of the industry's timber supply, how that timber is used, capacity utilization, and where the finished products are marketed.

Within Montana the Bureau also conducts the quarterly Forest Industries Information System, in cooperation with the Montana Wood Products

Association. This quarterly survey provides current information on employment, wages, and production in the state's forest products industry. The results are available free of charge. The information is also released to the media and is widely quoted.

4 SURVEY RESEARCH

The survey research division is one of the most frequently called upon services in the Bureau. Survey research takes many forms — from telephone surveys to mail, from local areas to statewide — and the Bureau handles them all. Telephone surveys in particular have become a popular means of obtaining opinions from Montanans in an effective and timely fashion, and many clients have contracted with the Bureau to survey specific topics of interest to them.

Utilizing a random digit sampling method — often referred to as "random digit dialing" — the Bureau is able to generate random samples of telephone numbers for its phone surveys. The samples are a representative cross-section of the population as a whole and can be generated for the entire state or just for specific areas within it.

The Bureau currently conducts the Montana Poll, a quarterly telephone public opinion survey cosponsored by the *Great Falls Tribune*. Topics can range from standard of living to budget deficits to ballot initiatives. Since the Poll usually focuses on only one or two major issues per survey, Bureau clients may be able to "piggyback" a question or two on a different subject. The Bureau is also able to generate telephone samples for clients wishing to do their own telephone survey work.

Montana Poll results are always published in the *Great Falls Tribune* and also appear later in the *Montana Business Quarterly*. The results of other surveys usually are available in published form from the Bureau. Since many surveys deal with issues affecting the entire state, the results often receive statewide news exposure.

5 MONTANA BUSINESS QUARTERLY

The *Quarterly* is the Bureau's flagship publication, in print for over twenty years. The *Quarterly* prides itself on providing quality information to readers interested in Montana's business and economic climate. Whether the articles summarize a recent Bureau research project or are submitted by someone else, they are grounded in solid methodology and written by people who know what they're talking about. In the *Quarterly* you will find the latest statewide economic analysis and forecasts, up-to-date information on local economies, analyses of the economic role of Montana's largest industries, plus helpful information about business management. The *Quarterly* is available by subscription, $15.00 for one year; $25.00 for two years, and $35.00 for three years. Single issues cost $4.00 each.

1986-87 Guide to SERVICES

6 COUNTY DATA PACKAGES

The Bureau's most recent addition to its services listing is the County Data Package. Combined in one folder is a series of statistical tables, frequently updated, of the most frequently-requested economic information for Montana counties. Personal income, population, employment, and household information are included in each package. Much of the information has been developed by the Bureau and is unavailable from any other source. To round out the package, information from standard sources, such as the Bureau of the Census, is also included. County Data Packages are available for $10.00 per county, or $250.00 for all fifty-six counties.

In addition to this current county data, the Bureau is working toward the development of projections for regions within Montana. Once again, this is information that is not now available from other sources.

7 ECONOMIC OUTLOOK SEMINARS

For eleven years the Bureau's Outlook Seminars have annually gathered together businesspeople and government officials in Missoula, Billings, Great Falls, and Helena to discuss prospects for the coming year. Done in cooperation with the local Chambers of Commerce, seminar participants hear the outlook for the state and local economies and get the latest economic forecasts and consumer survey information. A favorite of seminar attendees is the Local Business Panel, with area businesspeople offering their opinions on what the year holds.

A new addition to the seminar is a segment devoted to a current topic. Last year the state's natural resource industries were spotlighted, including their historical importance and what their role might be in the future. Different topics will be featured each year.

While the seminars are conducted annually in Missoula, Billings, Great Falls, and Helena, the Bureau has also held Outlook Seminars in Kalispell, Butte, and Havre. Seminar participants pay a registration fee of $50.00, which includes lunch, seminar folder, and proceedings of the seminar.

In Bozeman, the Bureau has presented several local outlook programs, underwritten by First Bank Bozeman.

8 DATA REQUESTS

Whether you're searching for the latest population estimates or need a Consumer Price Index figure, a call to the Bureau can often save you time and frustration. Bureau staff respond to requests for information regularly, and while we might not always have the information you need, we may be able to refer you to another person or agency. Give us a call if you have a question. Unless your request involves considerable time and effort, there is no charge for this service.

For further information on the Bureau, please call (406) 243-5113, or write Bureau of Business and Economic Research, University of Montana, Missoula, MT 59812.

the Bureau's random digit sampling program, and the interviewers then use a second random sampling procedure to select the person in the household to be interviewed. This procedure eliminates interviewer choice in selecting the respondent and assures selection of a representative sample.

Distribution of the sample based on age, sex, residence, employment status, and income compare favorably with available data on the state population and, thus, the Poll results are considered to be representative of Montana's actual adult population.

As with all sample surveys, the results of the Montana Poll can vary from the opinions of all Montanans because of chance variations in the sample. With a minimum statewide sample of 400, the overall results are subject to a margin of error of five percentage points either way, 95 percent of the time, because of chance variations. That is, if one talked to all Montanans with phones during the survey period, there is only one chance in twenty that the findings would vary by more than five percentage points. Findings for smaller groups of respondents within the overall sample (subsamples based on age, sex, residence, income, etc.) are subject to a somewhat higher margin of error, which would vary depending on the size of the respective subsamples.

Of course, Montana Poll results could also differ from other polls because of differences in the exact wording of questions, different interviewing methods, and differences in when the interviews were conducted.

outlook, but overall consumer sentiments remained less upbeat than they once were.

At the end of 1983, about half of those polled expressed a positive short-term outlook (table 3). That proportion slipped to a low of 21 percent last December and improved only slightly in June. By contrast, over half — 57 percent — expressed a negative outlook in June. Positive assessments of the long-term outlook peaked in December 1984, when 40 percent of all respondents viewed the five-year outlook as favorable. In June 1985 that proportion decreased to a little more than one-fourth of all

(continued on page 15)

NICOLE FLEMMING

Montanans Comment on State Political Leaders

Montanans have over two years to go before selecting a new governor, but if the results of the June 1986 Montana Poll are any indication, current Governor Ted Schwinden might well have the backing to be elected for a third term, should he decide to run.

The Montana Poll, conducted by the University of Montana Bureau of Business and Economic Research and cosponsored by the *Great Falls Tribune*, surveyed 404 Montanans eighteen years and older between May 27 and June 9. Eighty percent of those polled said they are registered to vote in Montana.

Poll respondents were asked a number of political questions, some of which dealt with Schwinden's performance as governor.

Although the Poll was conducted before the legislature convened in special session to deal with Montana's serious budget problems — a major leadership challenge for Schwinden — Montanans appeared satisfied with the way he's carried out his job thus far.

Seventy-two percent of those polled said they approved of how he is handling his job as governor of Montana. Less than a fourth (22 percent) expressed disapproval of his overall performance (table 1).

This support was widespread among Montanans across the board. Even political affiliation did not appear to make a difference.

In addition to general support for Schwinden, 48 percent of those polled said they thought Schwinden should run for a third term, and half said that they would be at least somewhat likely to vote for him if he did (tables 2 and 3). Those who consider themselves Democrats, or closer to that party, were even more likely to say Schwinden would get their vote.

Just over a fourth (27 percent) said they probably would not vote for Schwinden if he ran again. At the time of the Poll, the governor had not announced whether he intends to try for a third term or not.

Despite the support for Schwinden, about 36 percent felt he should not pursue a third term. Of that group, about half were critical of him, usually about his handling of the economy and the state's budget problems. The rest were more general. Some said it was "time for a change" or that the state needs new approaches. Others said two terms is enough for anyone, governor or president.

Given the lead time to the election, it's not too surprising that some Montanans were still undecided about whether Schwinden should run for office one more time and whether they would vote for him in 1988.

Fifteen percent of those polled said they didn't know if Schwinden should run for another term, and 7 percent said they were unsure of whether they would vote for him if he did. Another 17 percent of Montanans said that even if Schwinden did run again, their vote would depend on who his opponent is.

Just who will be running for the governor's slot is still a matter of conjecture, since no formal announcements have been made. Although some potential candidates may be waiting for a decision from Schwinden before tossing their hats into the ring, many names have been bandied about as possibilities.

Those polled were given a chance to give their impressions, positive or negative, of ten public figures whose names at one time or another have come up as contenders. They included: Mike Greely, Attorney General; Bob Marks, House Republican Leader; Ron Marlenee, Eastern Congressional District Representative; Frank Morrison, Associate Justice of the Supreme Court; Jack Ramirez, House Republican Whip; Ted Schwinden, Governor; Stan Stephens, State Republican Leader; George Turman, Lieutenant Governor; John Vincent, Speaker of the House; Jim Waltermire, Secretary of State.

The question did not identify these individuals by either their position or their political affiliation.

Poll results revealed that few Montanans had negative impressions about any of these men. In fact, many Montanans had no impression at all — at least not of several of these public figures.

At least two-thirds of those polled said they were not at all familiar with Bob Marks, Frank Morrison, Stan Stephens, and John Vincent. Even Lieutenant Governor George Turman was not known to 56 percent of those polled. And at least a third said they weren't familiar with Jack Ramirez and Mike Greely.

Montanans' most favorable impressions once again were reserved for the current governor, with 70 percent of those polled saying they had a favorable impression of him. Others whose names have been more in the public eye over the years also received more positive ratings. Sixty percent of those polled said they had a favorable impression of Ron Marlenee, with his eastern Montana constituents particularly favorable. At least 40 percent expressed similar sentiments about Mike Greely and Jim Waltermire.

The list of ten public figures was then divided into two groups, Republicans and Democrats, and Montanans were asked which from each group they would vote for as governor, assuming the election were being held today. Political affiliation was not mentioned in either case.

One group consisted of Marks, Marlenee, Ramirez, Stephens, and Waltermire — all Republicans. Ron Marlenee clearly received the highest number of "votes" (33 percent), with Jim Waltermire receiving the second highest number (18 percent).

Fifteen percent of those polled said they didn't know which one they would choose, with several saying they didn't know enough about the individuals to make a decision. Another 13 percent said they wouldn't vote for any of them.

The outcome among the second group — consisting of Greely, Morrison, Schwinden, Turman, and Vincent, all Democrats — was not very surprising. Montanans most frequently chose Ted Schwinden as the person they would vote for if the election were being held today (56 percent). Next in line was Mike Greely, but he captured only 13 percent. About 9 percent said they wouldn't vote for any of these "candidates," and 12 percent said they didn't know or couldn't make a selection at this time.

Based on the possible "candidates" offered (five Democrats and five

Table 1

Overall Performance Rating for Governor Schwinden

Approve	72%
Strongly	16%
Somewhat	56%
Disapprove	22%
Strongly	6%
Somewhat	15%
Don't know, undecided	6%

Table 2

Montanans' Opinions about a Third Term for Governor Schwinden

Should run for a third term	48%
Should not run for a third term	36%
Don't know, undecided	15%

Table 3

Likelihood of Voting for Schwinden in 1988

Likely to vote for Schwinden	50%
Very likely	25%
Somewhat likely	24%
Not likely to vote for Schwinden	27%
Not too likely	11%
Not likely at all	16%
Depends on who his opponent is	17%
Don't know, undecided	7%

Note: Percentages may not add to totals, or to 100, because of rounding.

Republicans), there were twenty possible candidate pairs that could have been selected by those polled. Poll results suggest, however, that it is still too early to be making any calls about Montanans' preferences for gubernatorial matchups in 1988. One-third of those polled were unable or unwilling to select a pair of candidates.

Among those who did come up with a candidate from each party, a Schwinden-Marlenee matchup was mentioned most often. Some 24 percent of all respondents agreed on those two names. Schwinden and Waltermire (11 percent) and Schwinden and Ramirez (7 percent) were the next most frequently named combinations. The rest of those polled (about 26 percent) selected one of the seventeen other possible pairs. □

Table 1

Montanans' outlook for major consumer markets

	Good Time to Buy	Bad Time to Buy
. . . Market for major household items (furniture, refrigerators, stoves, televisions, etc.) over the next six months		
June 1986	54%	23%
December 1985	52%	30%
June 1985	54%	24%
December 1984	59%	27%
June 1984	61%	24%
December 1983	58%	28%
June 1983	55%	25%
November 1982	34%	37%
December 1981	28%	31%
. . . Market for homes over the next twelve months		
June 1986	74%	16%
December 1985	60%	26%
June 1985	61%	28%
December 1984	51%	38%
June 1984	45%	44%
December 1983	56%	34%
June 1983	64%	21%
November 1982	49%	34%
December 1981	10%	73%
. . . Market for automobiles over the next twelve months		
June 1986	61%	21%
December 1985	48%	32%
June 1985	47%	30%
December 1984	47%	38%
June 1984	52%	34%
December 1983	52%	33%
June 1983	57%	27%
November 1982	38%	38%
December 1981	19%	51%

Note: Percentage detail may not add to 100 because of rounding and omission of miscellaneous responses.

(continued from page 13)

respondents and there was little change seen this June.

A look at different respondent groups shows pronounced differences. Those residing in the Billings trade area, a region consisting of Yellowstone County and the widely surrounding area, were much more likely to express pessimism for the short- and long-term outlook for the state economy in the June Poll. The recent poor farm years, the drop in oil activity due to falling worldwide oil prices, and the completion of Colstrip construction have dampened that area's economy recently, and consumers apparently felt the effects. Curiously, these same events did not dampen Billings trade area consumers' attitudes concerning the home and auto markets.

On the short-term outlook for the state, 70 percent of Billings trade area respondents expressed a negative attitude, while only 14 percent were positive. In contrast, among Great Falls trade area respondents, less than half expressed a negative outlook, and one-third were positive. Figures were similar for the long-term outlook.

Other than that trend among Billings trade area respondents, there were few additional differences among respondent groups in June. On the state's short-term outlook, Montanans with at least some college were more likely to have a negative attitude than were those with a high school education. Interestingly, these attitudes are often reversed. For the long-term outlook, political liberals, regardless of political party preference, were decidedly more likely to have a negative outlook than self-described conservatives.

Also included in the Montana Index of Consumer Sentiment were questions regarding Montanans' personal economic situations and expectations (table 4). Despite the restrained evaluation of the state's prospects, 30 percent of those questioned said their own financial situations had improved over the past year, only a slight change from December. And virtually the same proportion expected to be better off in a year. The figures were 28 percent in June, compared with 27 percent last December.

Those from the eastern part of the state, especially those in the Billings trade area, were more likely to say they were worse off. Baby boomers, college graduates, and those with household incomes of $35,000 or more were more likely to report an

improved financial situation compared with a year before.

The outlook for retail sales

A majority of Montanans were still fairly positive about the market for consumer items such as furniture and major appliances (table 1). Responses to questions about the outlook for this consumer market are incorporated in the Montana Index of Consumer Sentiment.

Those polled were asked if the coming six months would be a good time or a bad time to buy such items. Over half — 54 percent — said it would be a good time to buy, up slightly from the 52 percent saying so in December. More significantly, there was a drop in the proportion saying it would be a bad time to buy, from 30 percent in December to 23 percent in June. The remaining 23 percent were undecided.

This outlook was shared by most Montanans, with only slight differences between respondent groups. However, by comparison, Montanans with at least some college education tended to be more positive in their outlook than were those with no college. □

Mary L. Lenihan is editor of the Montana Business Quarterly *and research analyst for the Bureau of Business and Economic Research, University of Montana, Missoula. She is associate director of the Montana Poll. Nicole Flemming, production editor of the* Quarterly, *assists with the Poll. Jim Sylvester, Bureau statistician, is responsible for the Poll's computer programming and data processing.*

Table 3

Montanans' outlook for the state economy overall . . .	Positive	Negative	Don't Know or Other
. . . during the next twelve months			
June 1986	24%	57%	19%
December 1985	21%	63%	16%
June 1985	24%	51%	25%
December 1984	36%	37%	27%
June 1984	41%	38%	21%
December 1983	49%	27%	24%
June 1983	46%	30%	23%
November 1982	33%	45%	22%
. . . during the next five years			
June 1986	25%	57%	17%
December 1985	28%	54%	18%
June 1985	27%	52%	21%
December 1984	40%	42%	18%
June 1984	35%	48%	17%
December 1983	39%	41%	20%
June 1983	36%	39%	25%
November 1982	37%	44%	18%

Note: Percentage detail may not add to 100 because of rounding.

Table 4

Montanans' personal financial outlook a year from now . . .	Positive	Negative	Don't Know or Other
June 1986	28%	51%	13%
December 1985	27%	51%	15%
June 1985	30%	54%	12%
December 1984	36%	48%	12%
June 1984	32%	49%	12%
December 1983	36%	47%	10%
June 1983	33%	52%	9%
November 1982	34%	44%	14%
December 1981	26%	47%	22%
Montanans' personal financial situation now, compared to a year ago . . .			
June 1986	30%	35%	34%
December 1985	28%	40%	32%
June 1985	32%	37%	30%
December 1984	35%	37%	27%
June 1984	36%	37%	25%
December 1983	39%	35%	25%
June 1983	34%	39%	26%
November 1982	29%	39%	32%
December 1981	20%	56%	23%

Note: Percentage detail may not add to 100 because of rounding and omission of miscellaneous responses.

Perspectives on Montana's Lagging Growth

TAT P. FONG

Over the twenty years between 1964 and 1984, Montana's total personal income measured in 1984 dollars rose 85 percent, compared to a gain of 109 percent for the United States. During the same period, Montana's share of U.S. total personal income twice dipped below its previous low. This poor performance of the state economy, coupled with the trend of a widening income gap between Montana's residents and the rest of the country, certainly is a concern to all Montanans.

The comparative economic status of a state's residents can be measured by per capita income, which is obtained by dividing total personal income by total population. Montana's per capita income has been below the U.S. average since 1953 (figure 1). And, the state's per capita income as a percentage of the U.S. average has fluctuated greatly between 1964 and 1984 (figure 2). A decline in the sixties was followed by a rapid surge in the early seventies due to very high farm income. Since then, Montana's per capita income has fallen relative to U.S. per capita income. In 1984, per capita income in the state was $10,546, or 82 percent of the national average of $12,789. Preliminary data for 1985 place Montana's per capita income at 80 percent of the U.S. figure. That was the largest discrepancy recorded since 1933. The objective of this article is to investigate the factors contributing to the deterioration of Montana's personal income. Through an in-depth analysis of Montana's industrial base, we hope to identify the relative strengths and weaknesses of the state economy.

A close look at personal income components

The two major components of total personal income are nonlabor income and labor income. Nonlabor income consists of dividends, interest and rent, as well as transfer payments such as Social Security benefits, unemployment compensation, welfare subsidies, etc. Expressed in 1984 dollars, nonlabor income in Montana increased from $1,109 million in 1964 to $4,444 million in 1984 for a growth rate of 211 percent, which is comparable to the U.S. growth rate of 217 percent. Labor income consists of wages and salaries, certain fringe

"The cause of Montana's lagging growth in personal income can be traced directly to the poor performance of its industrial base."

benefits, and proprietors' income. It is the income earned from participation in the labor force. Montana's labor income in constant (1984) dollars was $3,739 million and $5,716 million in 1964 and 1984, respectively. Its twenty-year growth of 53 percent is much lower than the national rate of 85 percent. The cause of Montana's lagging growth in personal income can therefore be traced directly to the poor performance of its industrial base.

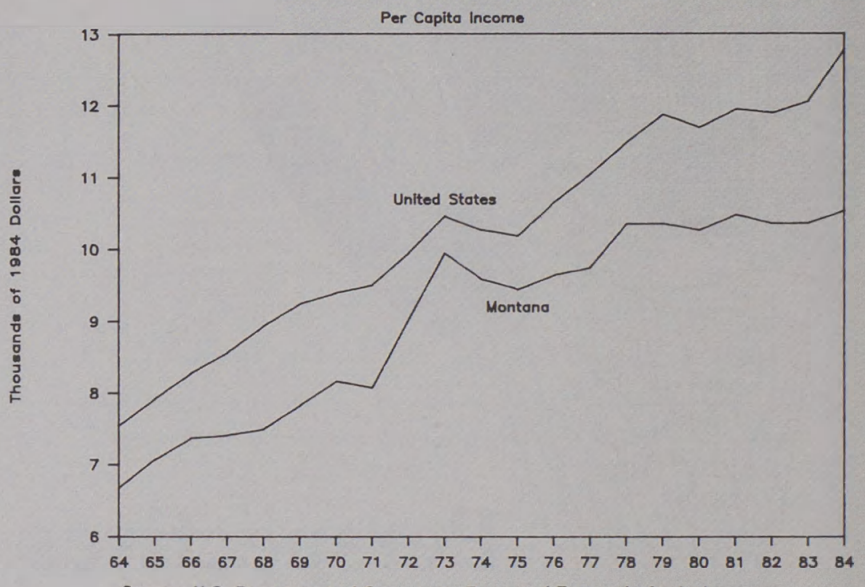
Labor income can be classified into farm and nonfarm labor income. Table 1 shows changes in Montana and U.S. labor income between 1964 and 1984. Both farm and nonfarm labor income in Montana performed poorly in comparison to the analogous national figures. Farm labor income, in fact, plunged 84 percent over the

Table 1
Changes in Labor Income, 1984 Dollars, Montana and United States 1964-1984

	Montana	United States
Farm	-84%	7%
Nonfarm	74%	88%
Total	53%	85%

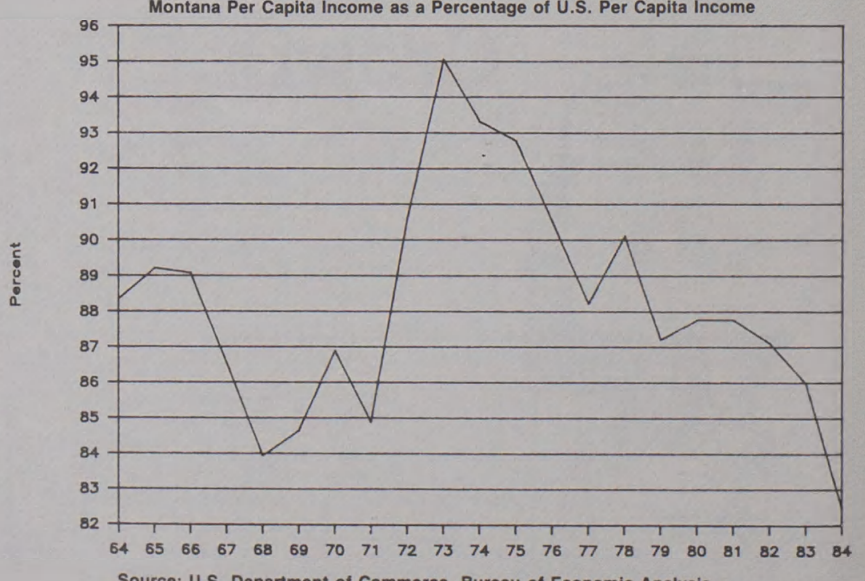
twenty-year period. Figure 3 shows farm and nonfarm labor income as a percentage of total personal income in Montana. In 1984, farm labor income dropped to less than 1 percent of the total. It is true that 1984 was an exceptionally bad year for Montana's farm sector due to a severe drought and low prices. Nevertheless, a downward trend in agriculture's contribution to total personal income has continued since 1973 when farm labor income comprised 17 percent of the total, the highest proportion in twenty years. A significant structural change in Montana's economy is quite obvious from figure 3; after staying consistently at the 9 percent level or above between 1964 and 1975, farm labor income averaged less than 4 percent of total personal income between 1976 and 1984. Yet the farm

Figure 1
A Persistent Income Gap



Source: U.S. Department of Commerce, Bureau of Economic Analysis.

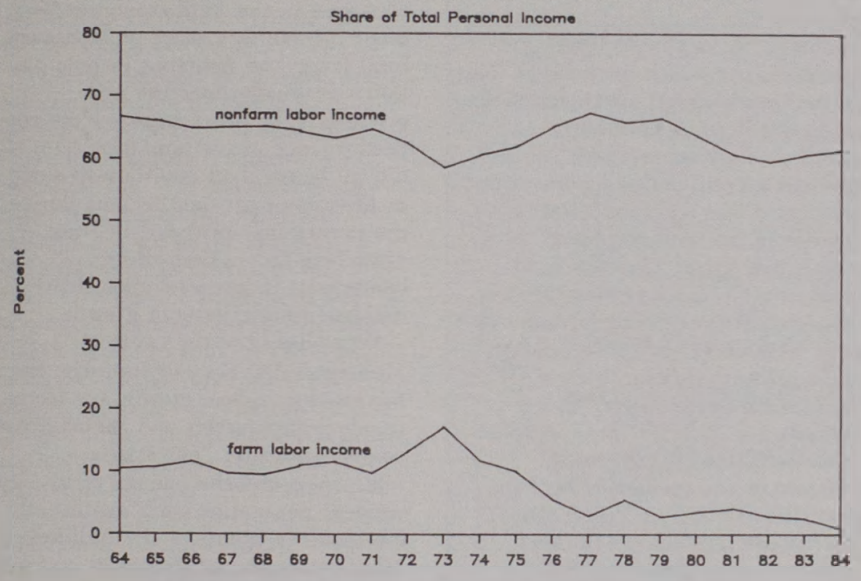
Figure 2
A Downward Trend Since 1973



Source: U.S. Department of Commerce, Bureau of Economic Analysis.

"In the early seventies, the impact of a recession in Montana's nonfarm sector was offset by a boom in its farm sector."

Figure 3
A Shrinking Farm Sector



Source: U.S. Department of Commerce, Bureau of Economic Analysis.
Note: The other components of personal income are property income and transfer payments.

sector remained more important in Montana than in the United States; nationally, the share of farm labor income averaged about 2 percent over the entire twenty-year period.

In the early seventies, the impact of a recession in Montana's nonfarm sector was offset by a boom in its farm sector. That was the reason why Montana's share of U.S. total and per capita personal income was able to maintain a relatively high level during that period. It was the only sparkling moment in the otherwise sluggish twenty years. As a result of the decline in the farm sector after 1975, the state economy had to rely on the growth of its nonfarm sector to pick up the slack. Nonfarm labor income grew 74 percent between 1964 and 1984. But that was 14 percentage points below the national rate of growth (see table 1), and not enough to offset the loss in Montana's farm labor income. Nonlabor income, on the other hand, had assumed greater importance by virtue of its growth of 200 percent or more.

In the next section, our focus will be on the evaluation of major nonfarm industries in the state, particularly individual industry performances relative to their respective national counterparts.

Nonfarm labor income: measuring the performance of Montana's industries

Nonfarm labor income in Montana can be classified into eight major industrial sources:

1. Agricultural and forestry services
2. Mining
3. Construction
4. Manufacturing
5. Transportation, communication and utilities
6. Wholesale and retail trade
7. Finance, insurance and real estate
8. Services

Labor income change in each of these industries will be analyzed by the "shift-share" technique. This method uses the growth of the U.S. economy as a benchmark for evaluating the change in a state economy over a period of time. It provides a point of reference for assessing what factors have contributed to the observed change. Following this technique, the actual change in the labor income of each nonfarm industry in Montana can be categorized into three components:

National growth. This component shows the change that would have occurred if each Montana industry had grown at the same rate as the U.S. average for all nonfarm industries.

Industry mix. This component shows the change in the Montana industry that occurred because the national growth rate of that particular industry differed from the U.S. average for all nonfarm industries.

Competitive share. This component shows the change that occurred because the growth rate of the Montana industry differed from the national average for that industry.

Table 2 shows the computations of the shift-share components for Montana's nonfarm sector. The first column shows the actual change in the labor income of each nonfarm industry in Montana between 1964 and 1984. The second column shows the hypothetical change for the same period if every industry in Montana had grown by 88 percent, the average growth rate for all nonfarm industries in the United States (see table 1). If this number is less than the actual change, it means the Montana industry has grown faster than the U.S. economy. By comparing these two columns, we notice that only three industries in Montana were able to outperform the national nonfarm economy: agricultural and forestry services; finance, insurance and real estate; and services. These industries together accounted for only 25 percent of Montana's nonfarm labor income in 1984. In other words, a large majority of Montana's nonfarm industries failed to keep pace with the national growth. Montana's nonfarm sector as a whole also grew more slowly. Was it due to Montana's industry mix or was it because Montana's industries didn't grow as fast as their national counterparts, or both?

Column 3 shows the industry mix

component of the change in Montana's nonfarm labor income. The positive total ($179 million) implies that the Montana economy in general consisted of a mix of industries that was favorable to growth. Agricultural and forestry services; mining; transportation, communication and utilities; finance, insurance and real estate; and services all grew more rapidly than the overall nonfarm average at the national level. If all industries in Montana had grown at the same rate as their national counterparts over the twenty-year period, Montana's nonfarm labor income would have gained $2,293 million, which is the sum total of $2,114 million and $179 million from column 2 and column 3, respectively. The discrepancy ($416 million) between this hypothetical change ($2,293 million) and the actual change ($1,907 million in column 1) is accounted for by the fact that the industries in Montana did not perform as well as their national counterparts. Column 4 makes this point.

Column 4 shows the competitive share component of labor income growth. A negative number indicates that the Montana industry grew slower than its national counterpart. All industries in Montana fell short of the growth rates achieved at the national level. The negative total (−$416 million) is an indication that the Montana economy did not compete well in the 1964-1984 period. By combining the results from columns 3 and 4, certain Montana industries can be defined as "locally declining." A locally declining industry is one which grew faster than the national average for all industries but slower than its national counterpart. In other words, it recorded a positive figure with respect to industry mix (column 3) but a negative figure with respect to competitive share. The Montana industries that fall into this category include agricultural and forestry services; mining; transportation, communication and utilities; finance insurance and real estate; and services. The fact that most of these industries are service-oriented underscores the predicament of the Montana economy: it failed to ride "on the coattails" of the nation's fastest-growing segment.

Table 2
Components of Labor Income Change, Montana, 1964-1984
(Thousands of 1984 Dollars)

	Actual Change	Shift-Share Components: National Growth	Industry Mix	Competitive Share
Agricultural and forestry services	13,120	8,763	5,783	(1,426)
Mining	104,850	137,845	98,962	(131,958)
Construction	104,005	242,696	(76,647)	(62,045)
Manufacturing	146,387	363,550	(156,726)	(60,437)
Transportation, communication, and utilities	309,129	310,898	12,010	(13,779)
Wholesale and retail trade	402,360	577,608	(96,050)	(79,198)
Finance, insurance, and real estate	135,648	127,184	51,366	(42,903)
Services	691,720	375,931	331,597	(15,809)
Total nonfarm labor income	1,907,217	2,144,476	178,574	(415,832)

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

National Growth is the change that would have occurred if each Montana industry had grown at the same rate as the U.S. average for all nonfarm industries.
Industry Mix is the change in the Montana industry that occurred because the national growth rate of that particular industry differed from the U.S. average for all nonfarm industries.
Competitive Share is the change that occurred because the growth rate of the Montana industry differed from the national average for that industry.

Expecting more of the same

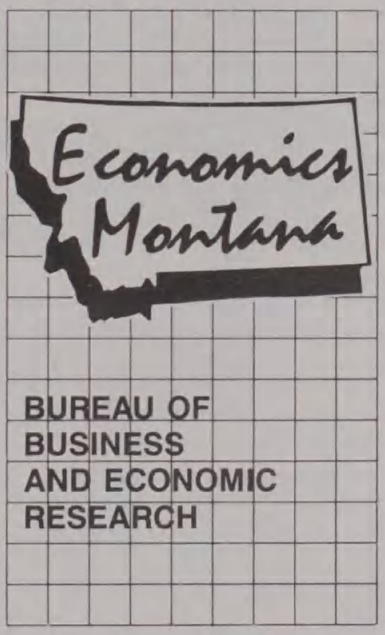
In the twenty-year period between 1964 and 1984, there was a decline in Montana's share of U.S. total personal income and a widening gap in per capita income between Montana and the rest of the country. This report suggests two reasons for the lagging growth. One is the structural change witnessed in the state economy; farm labor income as a share of Montana's total labor and nonlabor income has fallen gradually since the early seventies. The other reason is the poor performance of the nonfarm sector. It did no better than maintain its share of Montana's personal income during the twenty-year period. The most disturbing fact is that all its component industries trailed their national counterparts in growth.

What has been the cause of Montana's ills? For any industry, the factors that induce growth are access to adequate markets and the ability to compete costwise. The state's remoteness and the paucity of its resident population work against all industries in Montana. In addition, Montana's resource industries, traditionally the foundation of its economic base, have faced increasingly difficult markets — low prices and oversupply — in recent years. Farm products, wood products, metals, nonmetals, and energy all have been affected. Does this mean the lagging growth of the state economy will persist? Over the short run, the realistic answer is probably yes. Over the longer run, market conditions could change and Montana's resource industries may again be able to compete. Nevertheless, most producers, whether resource based or not, will continue to be afflicted with a distinct locational handicap. This hindrance is especially discouraging to the development of new types of businesses. Thus Montana's traditional dependence on its resource industries will likely continue for the foreseeable future. □

Tat P. Fong is a research associate at the Bureau of Business and Economic Research, University of Montana, Missoula. He works on the Economics Montana forecasting program.

Forecasting Montana's Economy

PAUL E. POLZIN



The Economics Montana forecasting system, temporarily discontinued for lack of funding, has been resumed with the assistance of Mountain Bell. To help provide public and private decision-makers with reliable forecasts and analysis, Mountain Bell has given the Bureau of Business and Economic Research a grant to continue the program.

Economics Montana provides projections of income and employment for the state on a regular basis. Mountain Bell's generosity makes it possible to continue bringing Montanans this information, which would not otherwise be available.

The latest Economics Montana forecasts predict a continuation of slow economic growth. Increases in overall economic activity in Montana are expected to lag behind the average for the United States. This suggests that no easy solution to the state's fiscal crises is likely to materialize in the immediate future, and the Montana Legislature, scheduled to convene in January 1987, will face tough choices.

The new Montana projections are based on forecasts for the U.S. economy as of May 1986 made by Wharton Econometric Forecasting Associates, Inc. The national outlook at that time called for significant economic growth in the last half of 1986 as a result of decreased oil prices. Overall, the projections were for economic growth during the 1986 to 1988 period to peak in 1987, but the figures for all three years were roughly equal to the long-run average. Inflation was projected to be very low in 1986, but gradually increase in 1987 and 1988. Interest rates were expected to increase slightly or remain stable. Since May, Wharton economists have become slightly more pessimistic about the U.S. economy; they have not significantly revised their outlook for economic growth, but they have revised upward their projections for interest rates and inflation. In the past, similar revisions in national forecasts have not significantly modified the projected trends in Montana.

Based on the May national projections, the Montana forecasts for nonfarm labor income, a proxy for overall economic activity, show a real (net of inflation) growth rate of 3.8 percent in 1986, 3.7 percent in 1987, and 2.6 percent in 1988. Real personal income, the major determinant of consumer spending, is projected to jump 4.1 percent in 1986, due to the expected recovery of agriculture to pre-drought levels. The increases during 1987 and 1988 will be 3.1 and 2.1 percent, respectively.

The national outlook

The Economics Montana forecasts are based on the May projections for the U.S. economy prepared by Wharton. Wharton's latest national outlook is as of August 1986. As mentioned earlier, between May and August the Wharton economists revised upward their projection for inflation and interest rates. Both forecasts are summarized in table 1.

The Wharton economists expect moderate growth in the U.S. economy during the next few years accompanied by relatively stable interest rates and slowly rising prices. This overall outlook has not changed significantly in the last few months. The large apparent differences between the May and August forecasts for certain indicators shown in table 1 are because they are expressed as percentage changes, which exaggerate the extent of the revision. Analyses of similar revisions in the past indicate that they did not significantly affect the Economics Montana forecasts.

The preliminary data give mixed reviews for the 1985 performance of the U.S. economy. Economic performance as measured by real GNP increased 2.7 percent, down significantly from the 6.5 percent increase of 1984. The good news concerned inflation and interest rates. The Consumer Price Index (CPI) increased only 3.5 percent while the average rate on 90-day Treasury Bills was 7.5 percent and the mortgage rate was 11.7 percent; all of these rates are down significantly from just a few years ago. Housing starts remained stable at about 1.7 million and the unemployment rate averaged 7.2 percent, roughly equal to the 1984 rate but almost two percentage points below the figure for 1983.

Economic growth as measured by the change in inflation-adjusted Gross National Product is projected to continue in 1986, accelerate in 1987, and then decelerate in 1988. Throughout the 1986 to 1988 period, the annual growth in real GNP is projected to be between 2.6 and 4.4 percent. Since the end of World War II, real GNP in the United States has increased about 3.2 percent per year. Therefore, the forecasts for 1986 to 1988 are roughly equal to the long-term average.

Looking specifically at the forecast for 1986, Wharton believes that the negative influences of oil price declines on U.S. economic growth and production will last only through the middle of 1986 and the lower oil prices will lead to favorable trends in economic indicators during the last half of 1986. The low inflation rate projected for 1986, for example, is

"Economic growth in Montana is projected to lag behind the rest of the country. . . . This growth differential has plagued Montana since the late 1970s and is one of the major causes of our current fiscal crises."

one direct result of lower energy prices.

The good news will not last forever. After peaking in 1987, the growth in real GNP will decelerate in 1988. There will also be an upward trend in inflation, which is expected to rise in both 1987 and 1988. Some interest rates will rise, but the increases will not be uniform and will depend on the term of the loan; even so, most rates will remain below their 1985 levels. Housing starts, however, which are particularly important for Montana's wood products industry, are expected to remain strong throughout the entire period, with only modest declines in 1987 and 1988.

All in all, Wharton Econometrics forecasts relatively favorable trends for the U.S. economy during the next three years; real GNP will grow at about its long-run historic average; inflation will gradually increase, but still remain well below the double digit figures of a few years ago; interest rates will be stable or rise only modestly; and housing starts will remain strong.

The Montana outlook

Nonfarm labor income. Nonfarm labor income consists of wages and salaries, proprietors' income, and certain fringe benefits of all working persons, except those working on farms and ranches. In other words, it is the labor income of all working people (except those in agriculture) engaged in the production of goods and services, and is sometimes called nonfarm participation income.

Nonfarm labor income, after being converted to constant 1985 dollars, provides an approximate equivalent for changes in GNP, a statistical series not available for Montana. It measures payments to workers. In most areas there is a high correlation between economic activity and the amount of labor required to produce it. Thus we use nonfarm labor income as an indicator of economic activity.

The latest projections for nonfarm labor income in Montana are presented in table 2. Nonfarm labor income is projected to increase to about $5,991 million (1985 dollars) in 1986, a growth of about 3.8 percent. A 3.7 percent gain is projected in 1987, slipping to 2.6 percent in 1988.

Economic growth in Montana is projected to lag behind the rest of the country. Even though the pattern of growth in Montana is similar to that of the United States (deceleration in 1988), the increases in the state's nonfarm labor income are projected to persistently be one or two percentage points less than its national counterpart. This discrepancy may appear minor, but this growth differential has plagued Montana since the late 1970s and is one of the major causes of our current fiscal crises.

Total personal income. Personal income is the income received by Montanans from all sources. It includes labor income, transfer payments, and dividends, interest, and rent. Personal income does not include personal contributions for Social Security, and has been adjusted for persons who work in one state but live in another.

Personal income measures the ability of Montanans to purchase clothing, food, and other consumer

Table 1
Economic Trends for the U.S. Economy
1985-1988
Actual and Projected as of May and August 1986

	-Actual-	Forecast as of -------May 1986-------			Forecast as of -------Aug. 1986------		
	1985	1986	1987	1988	1986	1987	1988
Real GNP, percent change	2.7	2.8	4.4	2.6	2.7	4.0	2.8
Inflation (CPI), percent change	3.5	1.4	2.7	4.7	1.8	3.1	5.1
Interest rate, percent							
90-day T-bills	7.5	6.2	6.6	6.7	6.1	6.7	7.0
Mortgage rate	11.7	9.7	9.4	9.8	10.4	10.3	10.7
Housing starts, millions	1.7	2.0	1.9	1.8	1.9	1.9	1.8
Unemployment rate, percent	7.2	6.8	6.3	6.7	7.1	6.7	6.5

Source: Wharton Econometric Forecasting Associates (August 1986).

"The slower growth in property income can be traced to lower interest income associated with declining interest rates."

items. Therefore, forecasts of total personal income may be of particular interest to retailers and other persons concerned with consumer spending. Forecasts of total personal income for Montana are shown in table 2.

Total personal income in Montana, adjusted for inflation, is projected to increase about 4.1 percent in 1986. This increase must be interpreted cautiously so that it does not reflect a deceptively optimistic picture. The drought of 1984 and 1985 severely depressed agricultural incomes in Montana. The improvement in farm income forecast for 1986 is simply a return to pre-drought levels (which were also much below the levels of the 1970s), even though it does represent a large percentage increase.

Total personal income is projected to continue upward, with increases of 3.1 percent and 2.1 percent expected in 1987 and 1988. This is good news for Montana retailers because little income growth was experienced in the early 1980s.

Sharp-eyed readers may notice change in the trends in nonlabor income. During the early 1980s, growth in property income (dividends, interest, and rents) and transfer payments (especially Social Security benefits) rather than labor income kept total personal income from decreasing. From 1986 to 1988, nonlabor income in Montana is expected to grow less rapidly than labor income. The slower growth in property income can be traced to lower interest income associated with declining interest rates. The deceleration in transfer income cannot be so easily explained, but it may be associated with the scheduled changes in benefits to Social Security recipients.

Nonfarm wage and salary employment. Nonfarm wage and salary employment includes all jobs in Montana except those in agriculture and the self-employed (which includes farm and ranch proprietors). Even though some workers are not

Table 2
Personal Income by Major Component
Montana, 1985-1988
Actual and Projected as of May 1986

	Millions of Current Dollars				Millions of 1985 Dollars		
	-Actual-	--------Forecast--------			--------Forecast--------		
	1985	1986	1987	1988	1986	1987	1988
Total personal income	$8,877	$9,474	$10,118	$10,793	$9,241	$9,531	$9,727
Labor income	5,738	6,367	6,857	7,377	6,211	6,459	6,648
Farm labor income	-33	225	260	300	219	245	270
Nonfarm labor income	5,771	6,142	6,597	7,077	5,991	6,214	6,378
Agr. & forestry services	30	31	31	33	30	29	30
Mining	261	262	294	312	256	277	281
Construction	372	412	448	481	402	422	433
Manufacturing	566	592	622	657	577	586	592
Wood & paper products	256	265	275	288	258	259	260
Other manufacturing	310	327	347	369	319	327	333
Transportation & utilities	680	715	757	810	697	713	730
Wholesale & retail trade	1,075	1,150	1,233	1,316	1,122	1,161	1,186
Fin., ins. & real estate	290	305	327	352	298	308	317
Services	1,208	1,298	1,418	1,554	1,266	1,336	1,400
Government	1,289	1,377	1,467	1,562	1,343	1,382	1,408
Adjustments to labor income	-501	-541	-580	-623	-528	-546	-561
Residence adjustment	-14	-14	-14	-14	-14	-13	-13
Social security contributions	-487	-527	-566	-609	-514	-533	-549
Nonlabor income	3,640	3,648	3,841	4,039	3,558	3,618	3,640
Dividends, interest & rent	2,141	2,027	2,131	2,261	1,977	2,007	2,038
Transfer payments	1,499	1,621	1,710	1,778	1,581	1,611	1,602

Sources: U.S. Department of Commerce, Bureau of Economic Analysis and University of Montana, Bureau of Business and Economic Research, Economics Montana.

counted, nonfarm wage and salary employment provides a reliable indicator of short-run changes in the labor market and job opportunities in Montana. In short, nonfarm wage and salary employment measures an economy's ability to provide jobs for its residents.

Nonfarm wage and salary employment is projected to increase by 2.2 percent in 1986 (table 3). This translates into roughly 6,000 new jobs for Montana. The increases are projected to continue, with about 5,000 new jobs in 1986, and roughly 4,000 in 1987. Most of the increases will be in the trade and service industries. These forecasts may be too optimistic because the preliminary data for the first six months of 1986 recently released by the Montana Department of Labor and Industry show stable or declining employment from a year earlier. □

Table 3
Employment in Montana
1985-1988
Actual and Projected as of May 1986
(In Thousands)

	-Actual-	--------Forecast--------		
	1985	1986	1987	1988
Number of nonfarm wage and salary jobs	278.4	284.5	289.5	293.6
Mining	6.8	6.6	7.1	7.2
Construction	11.3	12.5	13.4	14.0
Manufacturing	21.7	22.0	22.2	22.4
Wood & paper products	9.3	9.3	9.3	9.3
Transportation & utilities	20.6	21.3	21.8	22.2
Railroads	4.0	3.8	3.7	3.7
Wholesale & retail trade	75.6	78.0	79.1	80.1
Fin., ins. & real estate	13.3	13.8	14.3	14.9
Services	60.1	61.3	62.6	63.9
Government	69.0	69.1	69.0	68.9
Federal	12.4	12.3	12.1	12.0
State & local	56.6	56.8	56.9	56.9

Sources: Montana Department of Labor and Industry, Research and and Analysis Divsion and University of Montana, Bureau of Business and Economic Research, Economics Montana.

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